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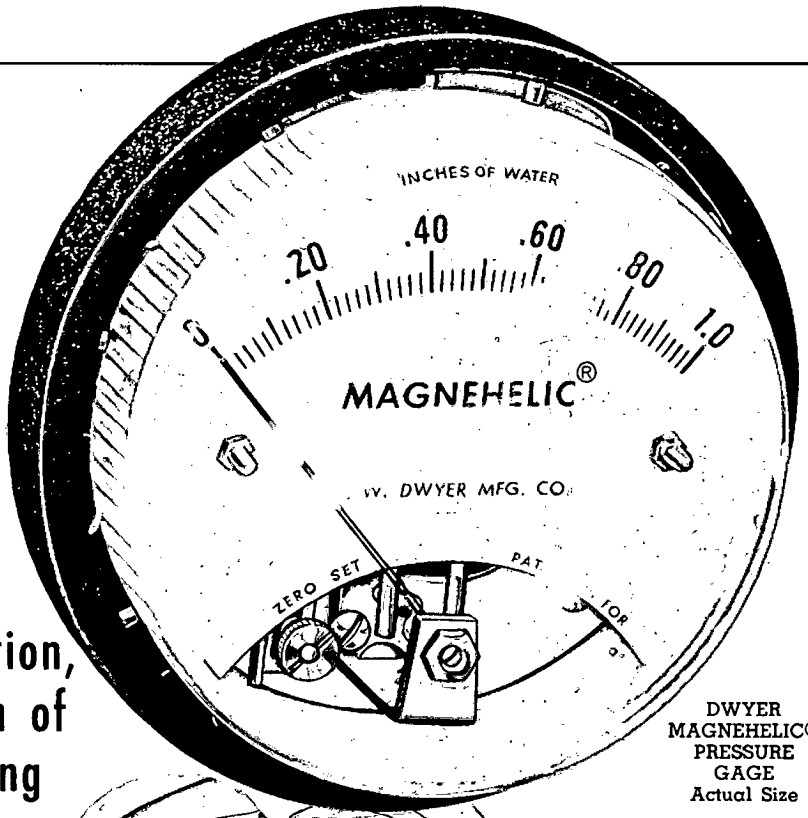
DWYER MAGNEHELIC® PRESSURE GAGES

Sensitive—Highly Accurate

Durable—Lifetime Action

Compact—Fast—Low Cost



DWYER MAGNEHELIC® PRESSURE GAGE Actual Size

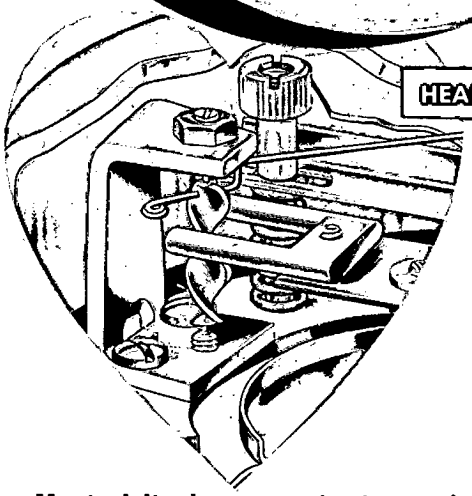
Designed to Aid Installation, Adjustment or Operation of Any Equipment Involving Air Movement

The NEW DWYER Magnehelic® Pressure Gages afford an ultra-positive method for checking air movement in fans and blowers, furnaces and boilers, filters and similar equipment. Accuracy of these Gages is guaranteed within one-half gradation. They are extremely sensitive, responding to the slightest pressure change. They give "plus," "minus" and "differential" readings. They can be used in any position, including upside down.

Fast, positive pointer action is assured, with virtually no hysteresis effect. Gages cannot be damaged by over or under pressures as high as 5 lbs. PSI. Zero adjustment is easy, taking only a few seconds; no screw driver or other tool is required. Both portable and stationary models are available.

CONSTRUCTION

Extremely simple in action, the Magnehelic® Pressure Gage consists of a flexible diaphragm supported by a cantilever spring that carries the magnet actuating the jeweled pointer assembly.



HEART OF THE MAGNEHELIC®

The helical magnetic linkage between diaphragm and pointer. Frictionless — accurate —inertia-free; no bearing or links to wear. Cannot be damaged by sudden surges.

Vertical diaphragm motion is transformed to rotary pointer motion by means of magnetic helical action.

The gage diaphragm is strong and flexible, being made of durable synthetic material that will not deteriorate, stiffen or age. The jewelled bearing provides maximum accuracy and sensitivity. The crystal plastic housing gives adequate protection against pressure, dirt and moisture; practically unbreakable, it slips off with a slight twist. All types of connections are possible: rubber tubing, ⅛" pipe thread, ¼" copper tubing. Gage styles range from 0 to 1" of water up to 0-2.0 P.S.I.

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DWYER MAGNEHELIC® PRESSURE GAGES

OPERATION

The DWYER Magnehelic® Pressure Gage consists of two pressure tight compartments separated by a formed flexible diaphragm. "Minus" (less than atmosphere) pressures are connected below the diaphragm — "plus" pressures above the diaphragm.

Linked to this flexible diaphragm is a flat cantilever calibrated spring. With a change in pressure on the diaphragm (decreasing from underneath, or increasing from above), the cantilever spring is deflected by the diaphragm movement in proportion to the amount of pressure change.

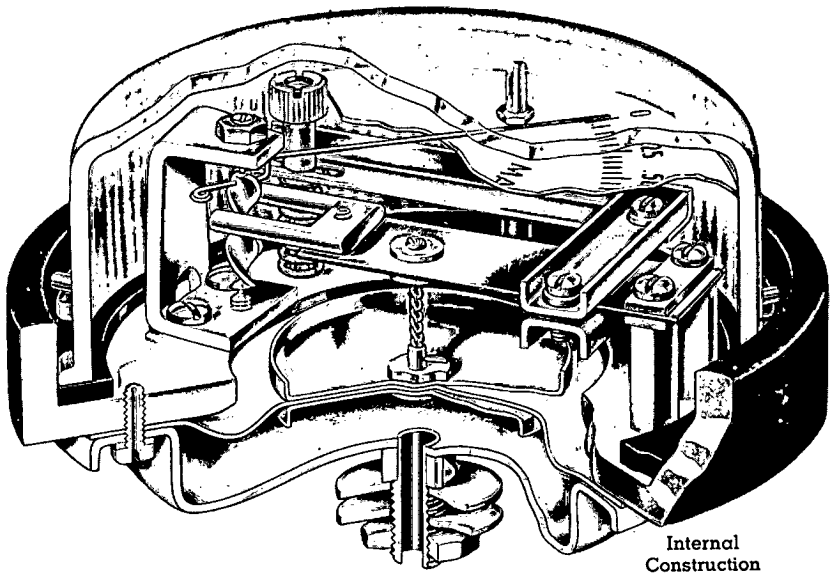
A powerful Alnico magnet is attached to the outboard end of the spring. The helical pointer assembly, mounted on jewelled bearings, is located vertically between the magnet ends where the magnetic field is most intense. The strength of this magnet is such that the helical assembly is forced to maintain a constant minimum air gap. As the spring (and magnet) is deflected, the spiral rotates the precise amount necessary to maintain this minimum air gap.

Extremely sensitive, such action will reflect motions of the magnet as small as ¼ of one thousandth of an inch.

The only field adjustment necessary is zero setting of the pointer. This step normally will be necessary only at installation or when gage position is shifted, as from flat to upright position. Adjustment is easy; the pointer is set at zero by means of the knurled screw that is accessible when the cover is removed.

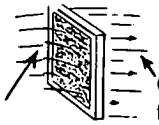
Should recalibrating of the Magnehelic® Pressure Gage ever become necessary, a qualified instrument mechanic can easily do the job. A single adjustment is required, shortening or extending the effective length of the calibrated spring.

Normal handling of this gage should assure long and dependable service. It is not a delicate instrument, and no unusual precautions should be observed. Over or under pressures within 5 lbs. and sudden sharp, explosive pressure changes of 5 lbs. or less will not affect the instrument.



Internal Construction of Gage

WHERE TO USE THE MAGNEHELIC® PRESSURE GAGE . . .



1. FILTER RESISTANCE

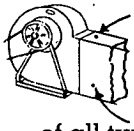
Check air filters in all types of equipment from window ventilators to largest air conditioning systems.

2. AIR VELOCITY

Use with pitot tube to measure air velocity from 400 f.p.m. to more than 10,000 f.p.m.

3. FURNACE DRAFT

Check all sizes and types of oil burners, stokers — and hand-fired installations. Portable use or permanent equipment on all boilers.

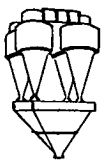


4. FANS and BLOWERS

Measure static pressures and air deliveries of all types of fans and blowers. Portable and stationary models equally suited.

5. GAS PRESSURES

Portable checking on small gas-fired units. Permanent installation on larger equipment.



6. STATIC PRESSURES

Check operating efficiency of dust collectors and processing equipment which use air.

USE THE MAGNEHELIC® ALSO

to check on flow meters, control equipment, automatic valves, gas-air ratio controls, etc.

OTHER DWYER INSTRUMENTS INCLUDE CO_2 INDICATORS, INCLINED TUBE GAGES, COMBUSTION TEST SETS, MANOMETERS and PITOT TUBES. WRITE FOR COMPLETE LITERATURE.

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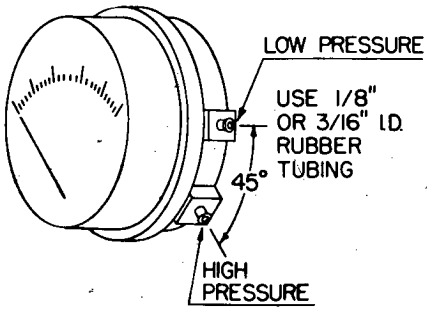
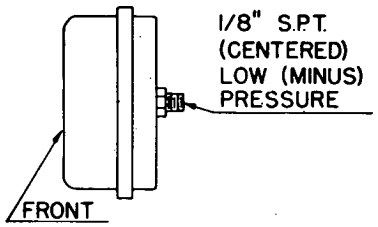
Dwyer CONTROLS GAGES

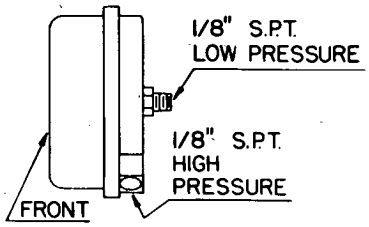
MAGNEHELIC® GAGE STANDARD CONNECTIONS



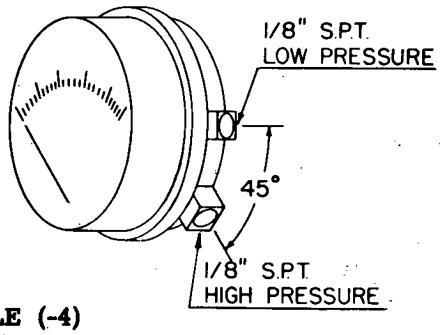
STYLE (-1)
Rubber tubing connections. Plus, minus or differential.



STYLE (-2)
Back connection. Negative pressure only. For installation, secured by the 1/8" S.P.T. back connection.



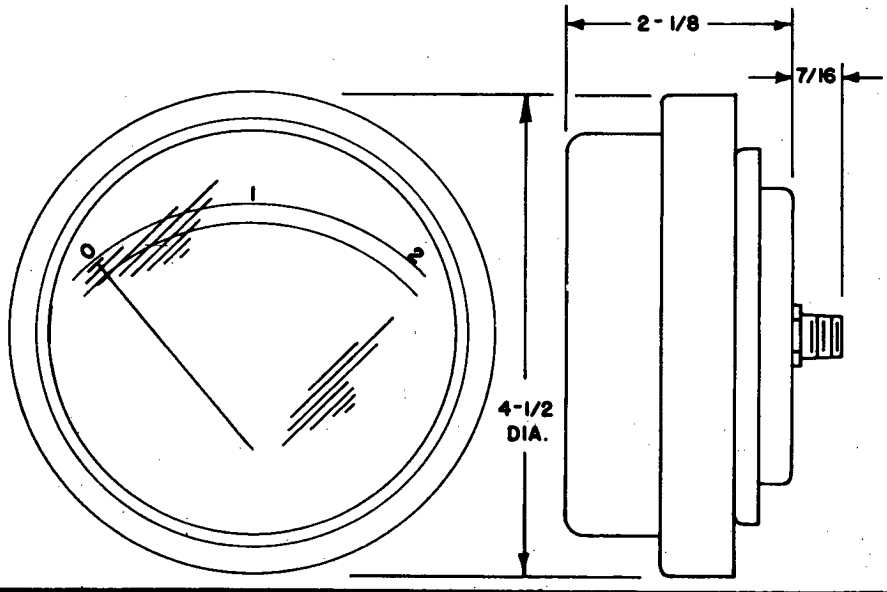
STYLE (-3)
Back and side connections. Plus, minus or differential. For installation, secured by the 1/8" S.P.T. back connection.



STYLE (-4)
Side connections. Plus, minus or differential. No mounting provided. If connectors do not furnish sufficiently rigid mounting, specify Style (-5).

STYLE (-5) **Side connections as in style (-4) above but with solid 1/8" S.P.T. stud on back (See Style -2) for mounting.**

STYLE (-6) Connections and Case for Semi-Flush Mounting Type. SEE Data Sheet #4



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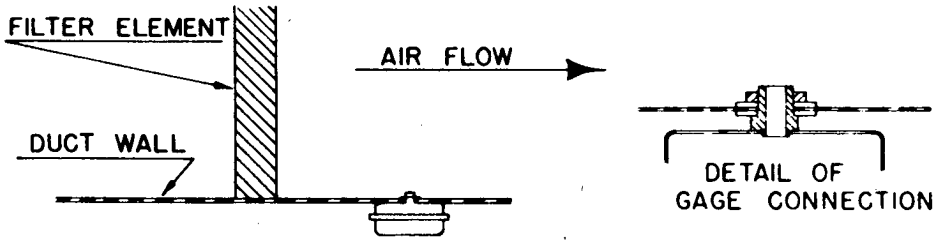
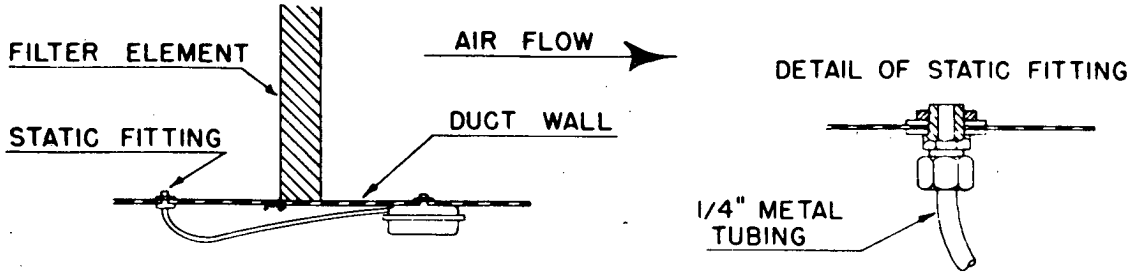
Dwyer CONTROLS GAGES

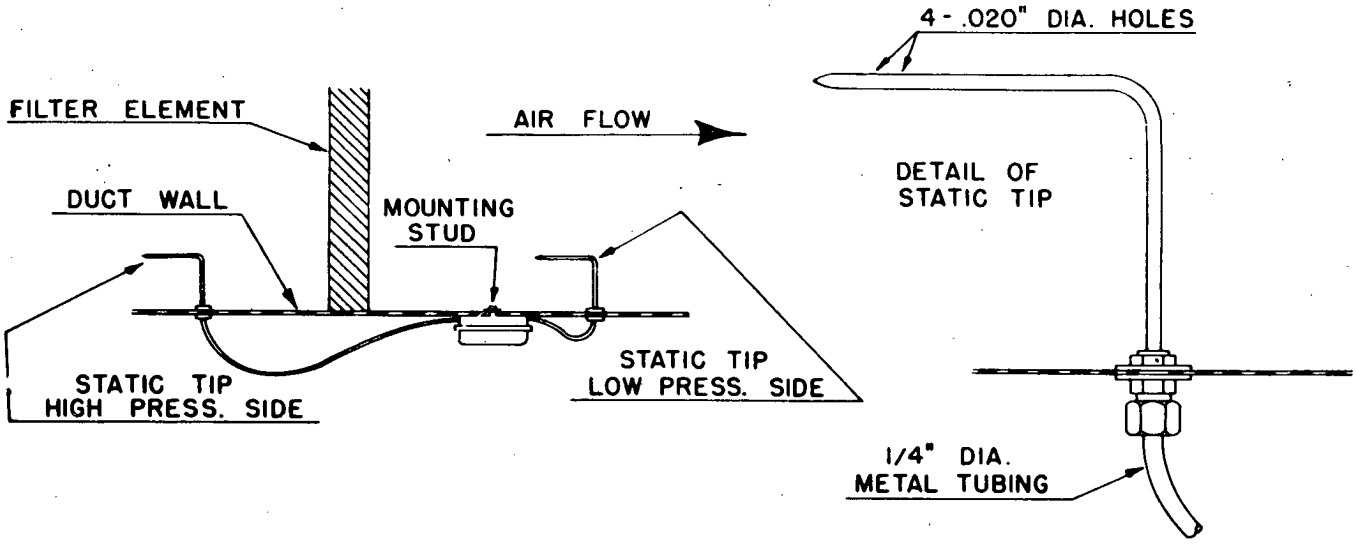
MAGNEHELIC® AIR FILTER GAGES



STYLE (-2AF) Two washers and hex jam nut for mounting supplied. One 3/8" hole in duct wall, located as shown above, required for gage mounting. This gage may be installed only on equipment where blower draws air thru element, i.e. where blower is located on downstream side of filter. Gage does not read differentially.



STYLE (-3AF) Accessories include two washers and hex jam nut for gage mounting and one static fitting. (Consists of 1/4" copper tubing compression fitting with two washers and hex jam nut.) One 3/8" hole in each side of filter required for installation. Gage must be mounted on duct wall downstream from filter element.



STYLE (-5AF) Accessories include two washers and hex jam nut for gage mounting and two static tip assemblies complete with washers and nuts for mounting. Two 3/8" dia. holes, located as shown are required for static tip installation. One 3/8" hole, located wherever convenient, is required for gage mounting. Note that the gage may be mounted remote from filter if desired, with leads running to filter.

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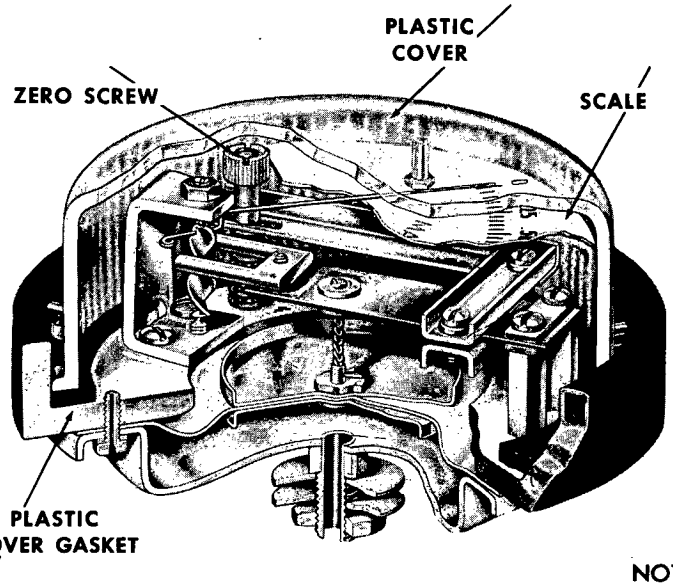
MAGNEHELIC® GAGE OPERATING INSTRUCTIONS



NOTE:
Factory replacement recommended for all parts not named above, as recalibration is required after replacement of operating parts.

INSTALLATION AND OPERATING INSTRUCTIONS

(1) Mount the gage securely in position using installation data provided in Data sheet #1 (#3 for Air Filter Gages) Select a location with minimum vibration and not subject to excessive heat. The gage may be mounted in any position, vertical, horizontal, etc.

(2) Run connections to the gage, making certain all joints are leakproof. Note that all back connections are low or minus pressure. Side connection, when only one is provided, is always high pressure. When two side connections are provided, the upper is low pressure and the bottom is high pressure.

(3) Remove the plastic cover with a counterclockwise twisting motion and set the pointer at zero by means of the knurled zero adjusting screw. When setting the pointer at zero make certain both gage leads are at atmospheric pressure.

(4) Replace the plastic cover with a firm clockwise twisting motion. The cover should always be secured firmly in position. A small amount of oil or vaseline may be used if necessary to create a good seal.

(5) Important Note: The zero adjustment is the only field setting to be made. Should the magnet assembly, calibrated spring, diaphragm or other operating part of the gage be replaced, recalibration is required.

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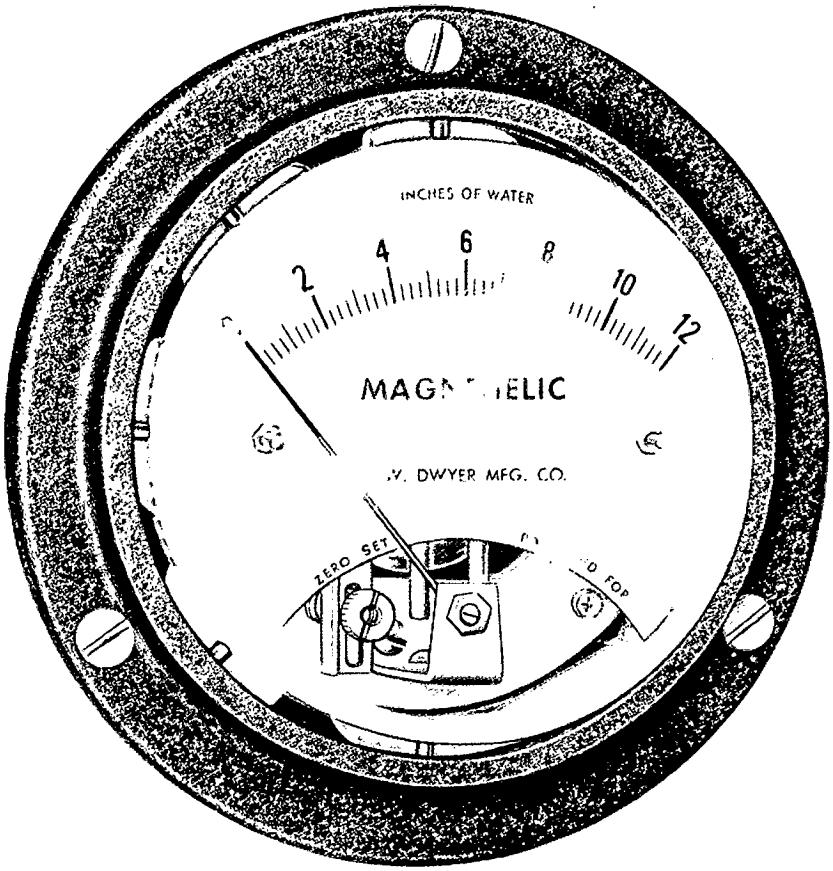
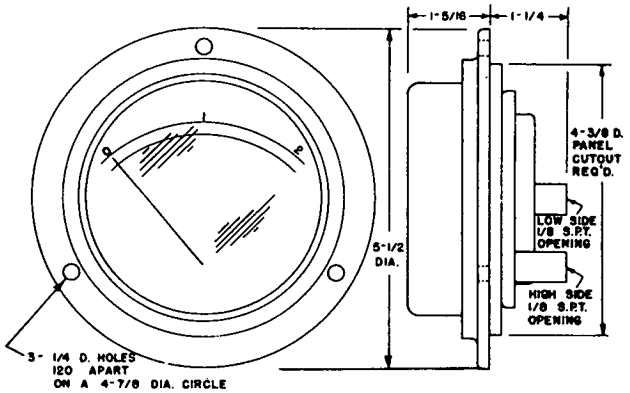
Dwyer CONTROLS GAGES

MAGNEHELIC® GAGE SEMI-FLUSH MOUNTING STYLE



Semi-Flush mounting case style as shown above is available for all ranges and connections. When this case is desired please insert "F" after catalog number—i.e. No. 1040F-6 for a Magnehelic Gage, semi-flush mounting type, 0-4" water range and with two ⅛" SPT back connections. Unless otherwise specified the (-6) connection style shown below will be furnished.



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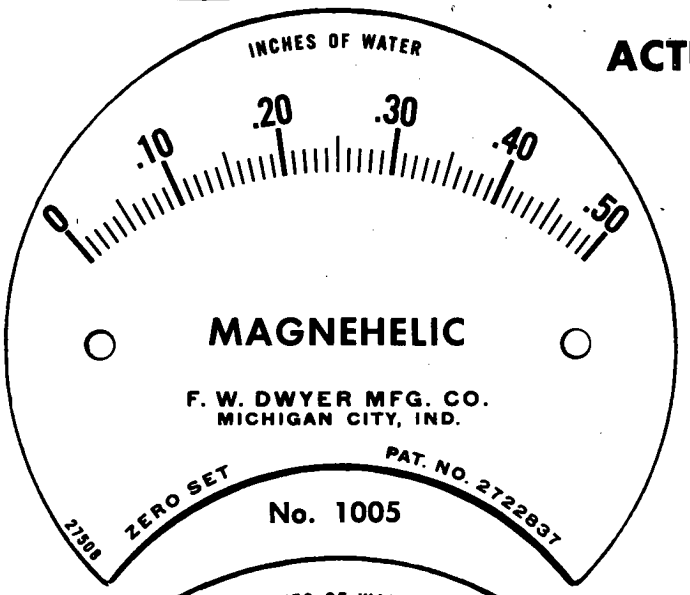
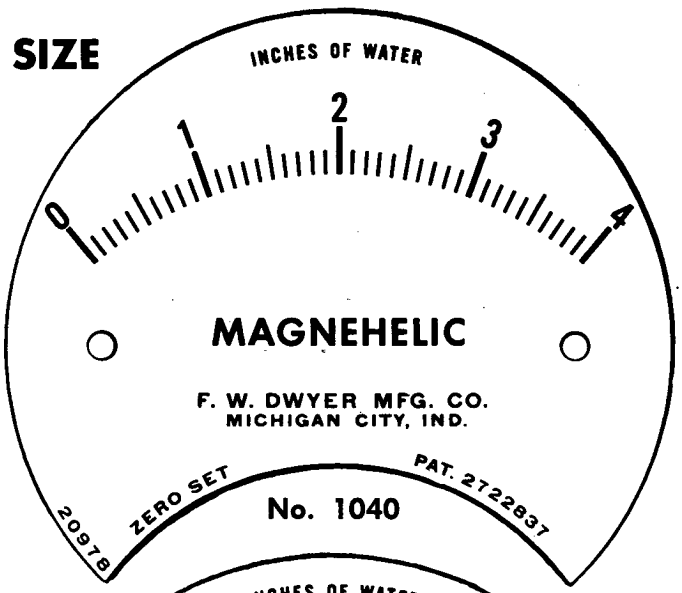
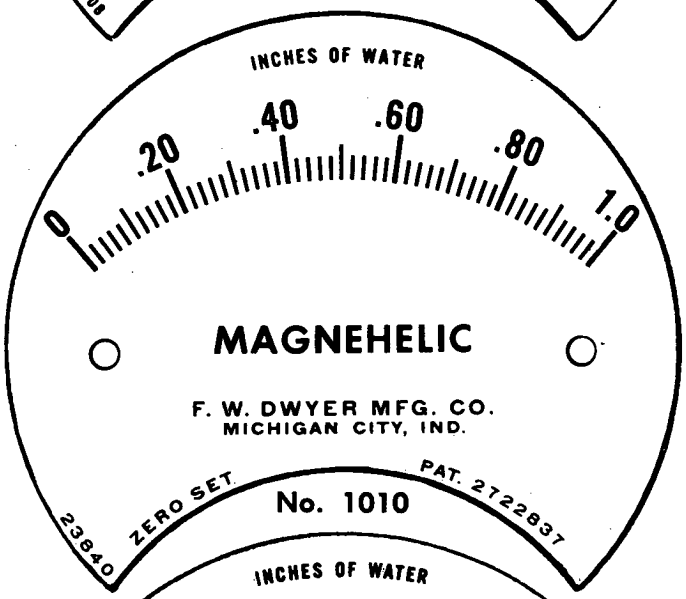
Dwyer CONTROLS GAGES

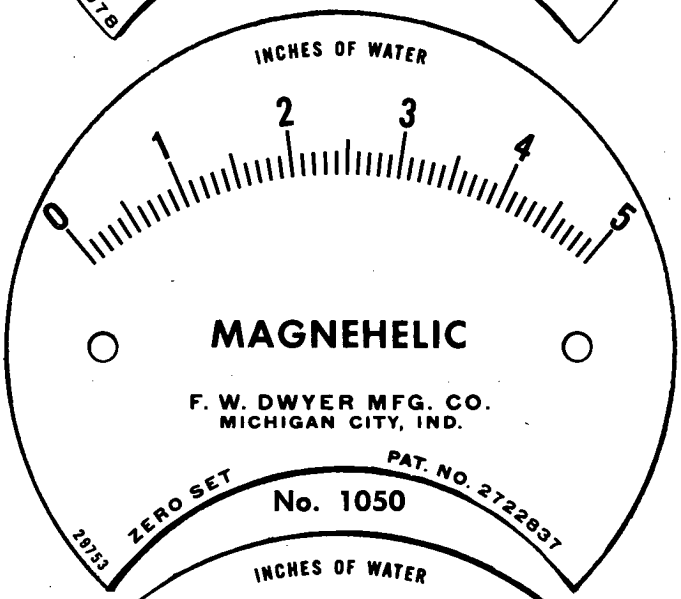
STANDARD MAGNEHELIC® GAGE SCALES

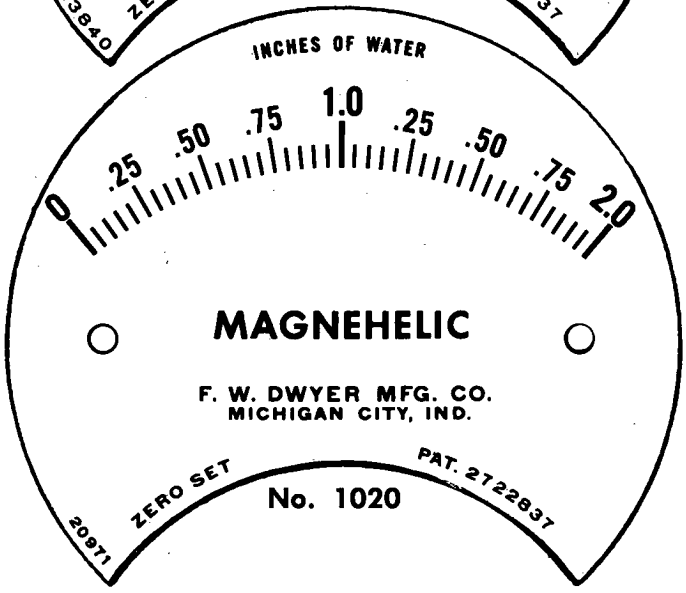
ACTUAL SIZE

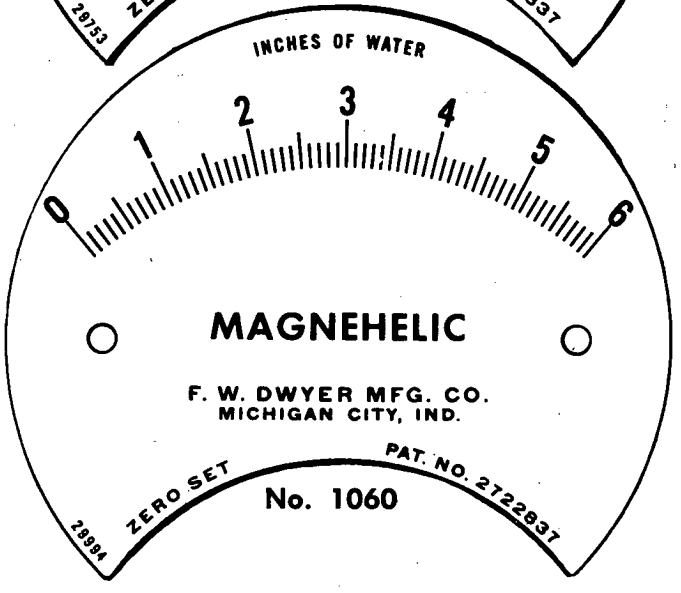












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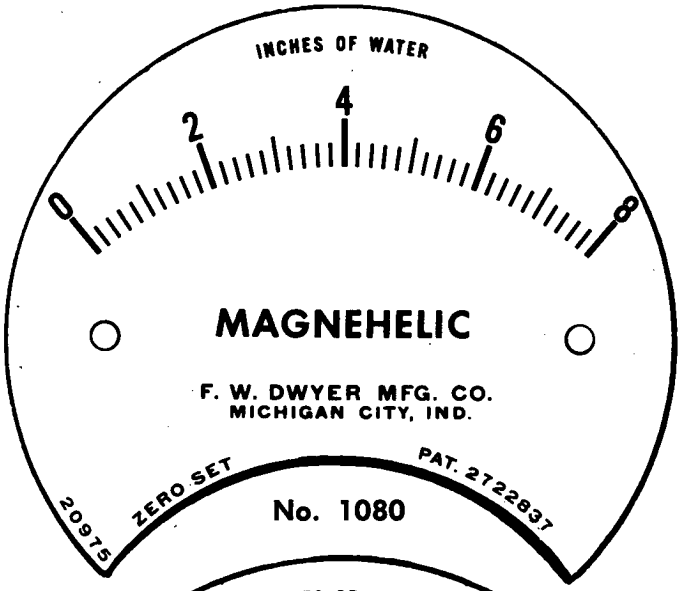
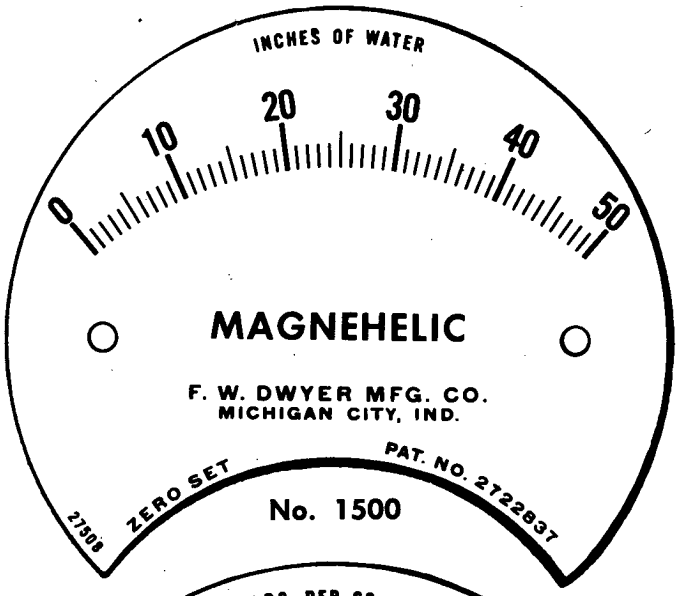
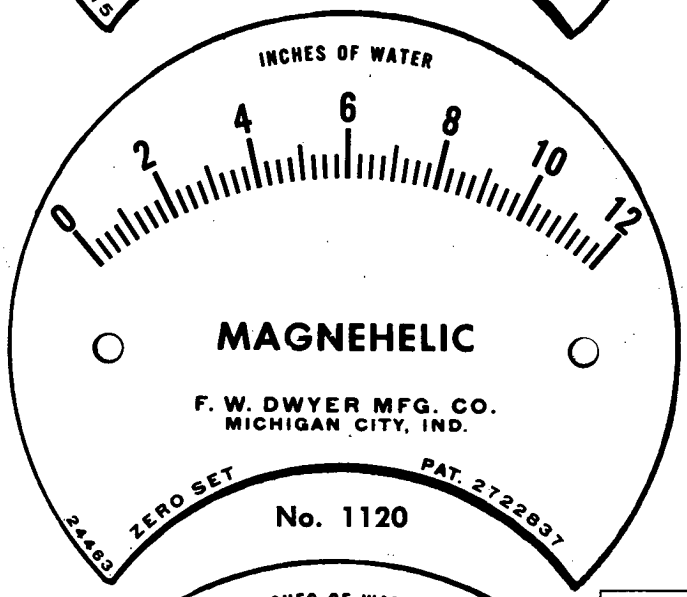
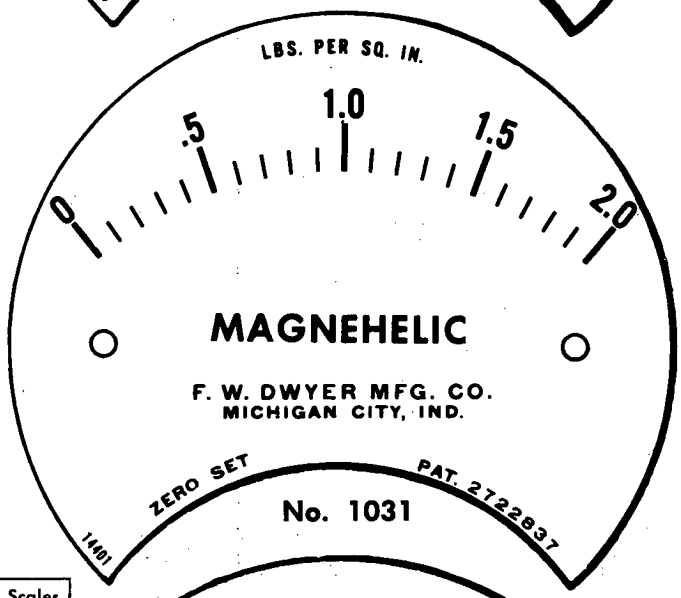
Dwyer CONTROLS GAGES

STANDARD MAGNEHELIC® GAGE SCALES

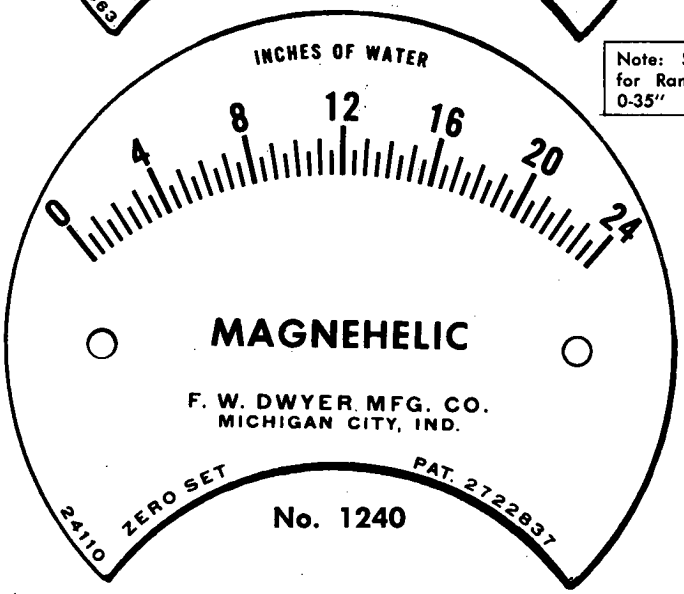


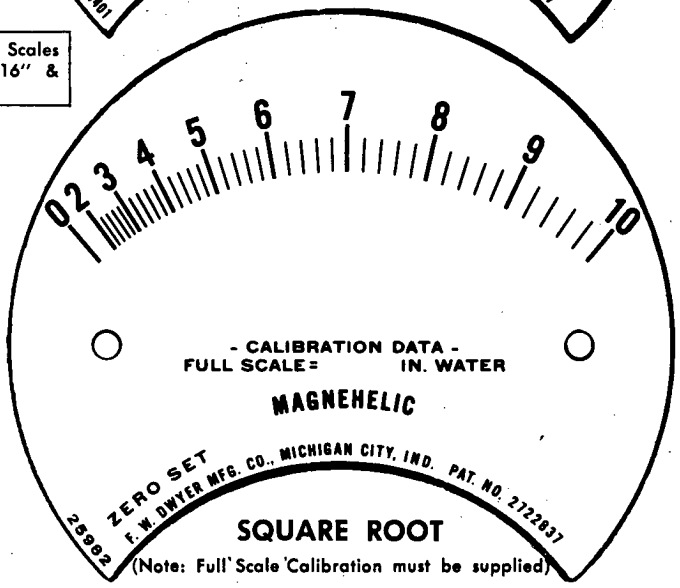






Note: See Dual Scales for Ranges of 0-16" & 0-35"





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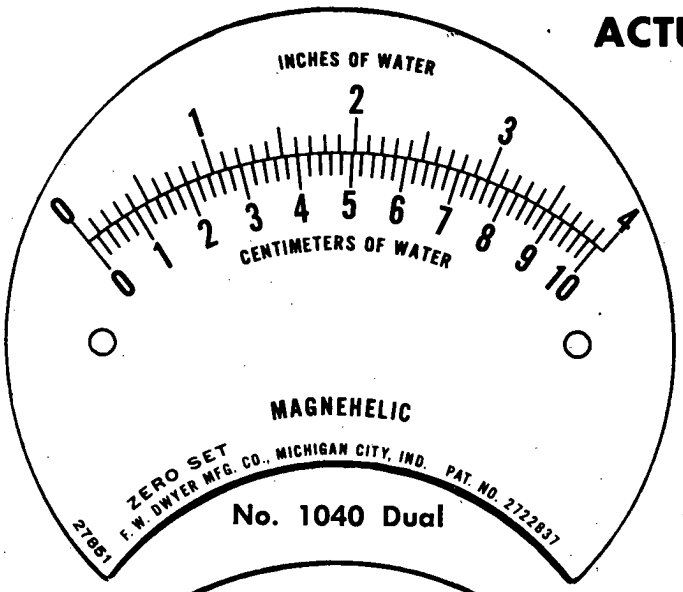
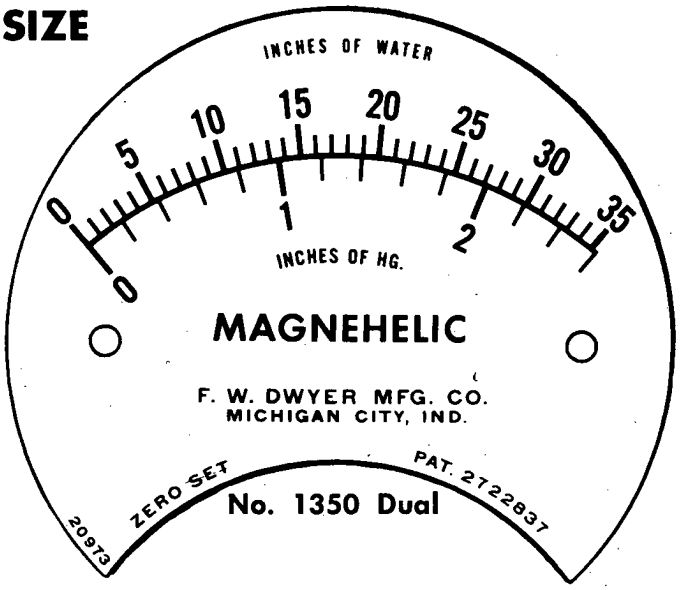
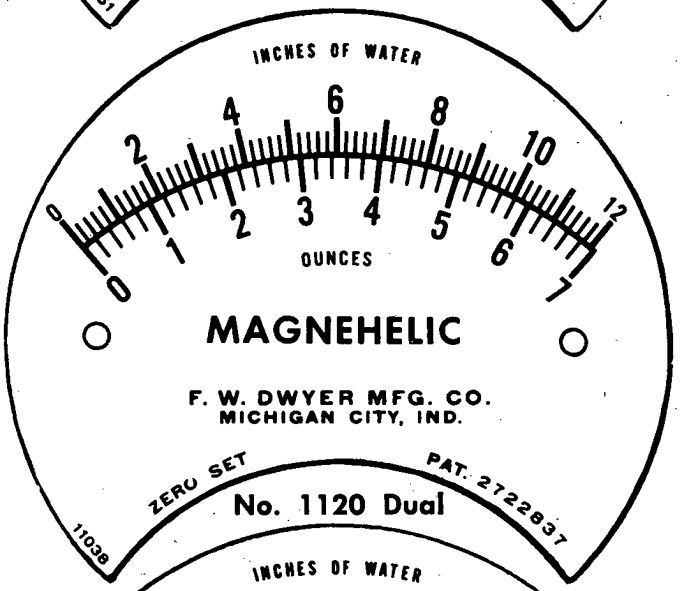
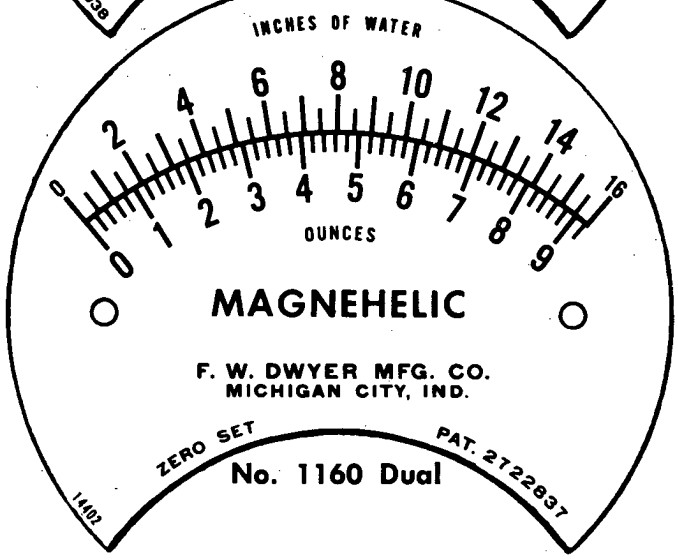
Dwyer CONTROLS GAGES — STANDARD MAGNEHELIC® GAGE DUAL SCALES

ACTUAL SIZE









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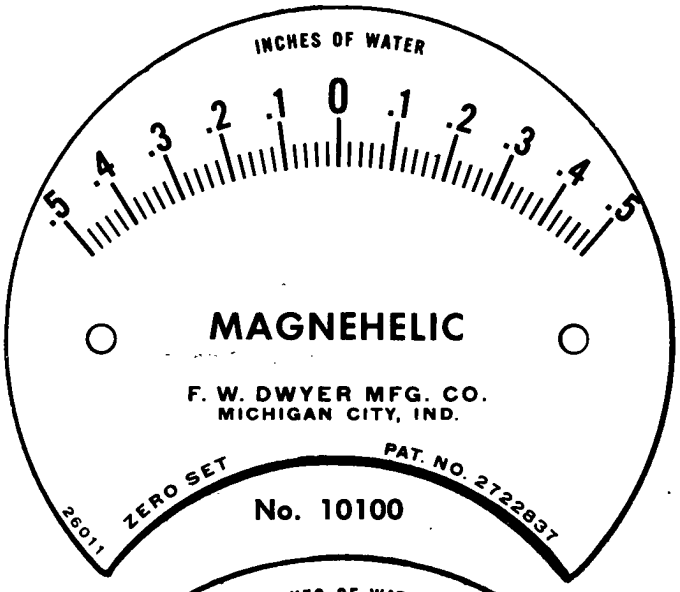
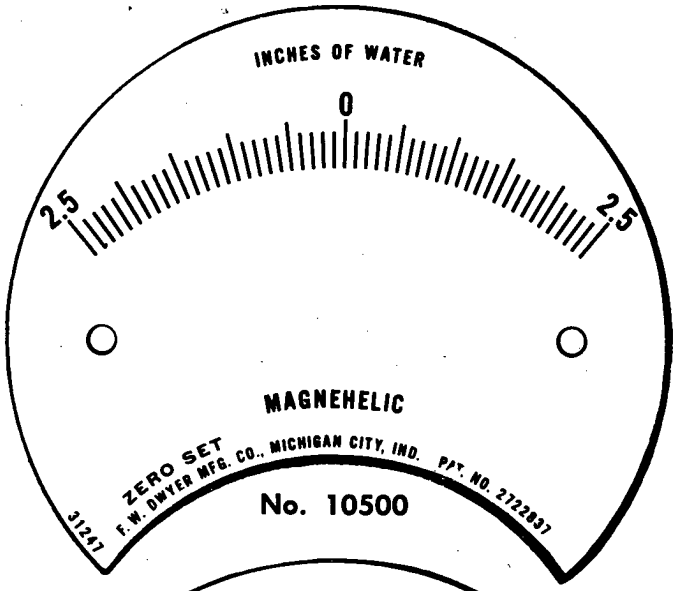
Dwyer CONTROLS GAGES

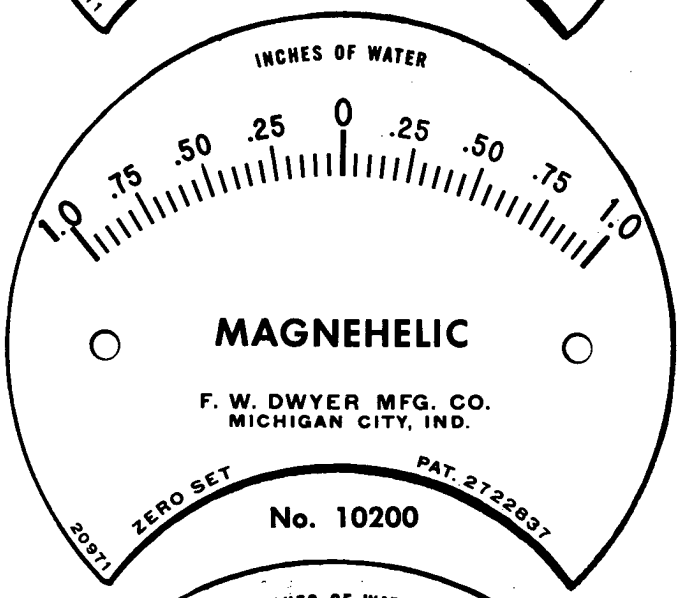
STANDARD MAGNEHELIC® GAGE
ZERO CENTER SCALES



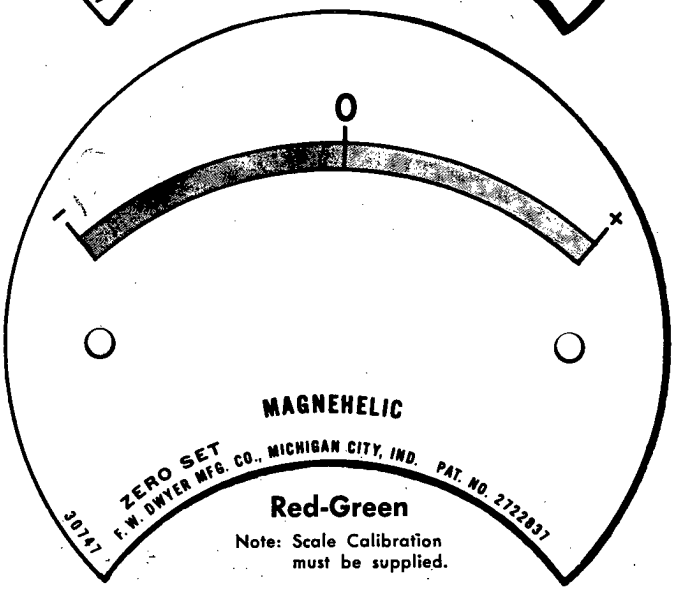
No. 10100



No. 10500

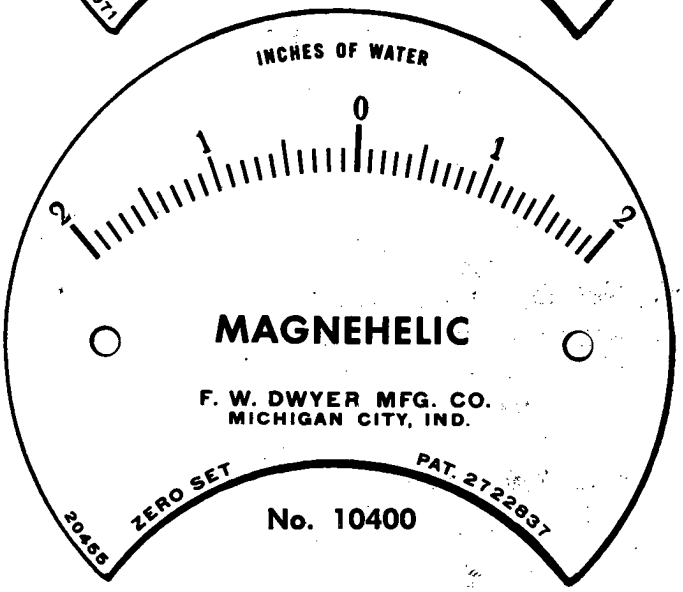


No. 10200



Red-Green

Note: Scale Calibration must be supplied.



No. 10400

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